Before the

FEDERAL COMMUNICATIONS COMMISSION
Washington, DC 20554

In the Matter of	)	
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Authorizing Permissive Use of the	)	**GN Docket No. 16-142**
"Next Generation" Broadcast	)	
Television Standard	)	
	)	

To: The Commission:

COMMENTS OF MONROE ELECTRONICS

I. INTRODUCTION

Monroe Electronics is a leading supplier of emergency alert system (EAS) equipment, and other solutions for FCC compliance with rules pertaining to emergency information. Monroe Electronics – incorporated in 1954 – has been involved in public alert and warning for over 30 years, starting with Emergency Broadcast Service-related equipment and solutions (including the first EBS-solution for the cable industry in the 1970s), and currently a range of emergency information and EAS solutions for the broadcast, cable and emergency management sectors.

Our Digital Alert Systems subsidiary focuses on supporting the emergency information requirements of the broadcasting industry, and we currently furnish FCC-certified EAS equipment to over 77% of all broadcast television licensees. The subsidiary has been at the forefront of major technical innovations in emergency alerting from its start, including industry's first FCC certified EAS encoder-decoder with support for Common Alerting Protocol ("CAP") functionality, on-board support for ATSC 1.0 data broadcast monitoring, multilingual alerting support, and industry's first integrated EAS encoder and CAP originator for emergency managers.

With solutions for EAS, accessible emergency public information, multilingual alerting, and integrated solutions for public safety agencies, Monroe Electronics has striven to collaborate with its government and private sector partners in advancing the Nation's public warning capabilities, including the Emergency Alert System (EAS) and the Wireless Emergency Alert (WEA) system. We have expanded that scope to include support for ATSC 3.0 Advanced Emergency Alerting.[1]

[1] "Digital Alert Systems and Triveni Digital Offer ATSC 3.0 Advanced Emergency Alerting Starter Kit for Easy Migration Path to Next-Gen TV Standard" Broadcasting & Cable, April 22, 2017 http://www.broadcastingcable.com/thewire/digital-alert-systems-and-triveni-digital-offer-atsc-30-

Monroe Electronics' experts have been extensively involved in the development and evolution of the EAS, IPAWS and WEA systems. Monroe staff has participated in Commission working groups (including the Commercial Mobile Service Alert Advisory Committee - CMSAAC - and the Communications Security, Reliability and Interoperability Council - CSRIC) and proceedings that created the regulatory environment for the EAS systems. Via its involvement in groups like the EAS-CAP Industry Group (ECIG), Advanced Television Standards Committee (ATSC), SCTE/CEA and other entities, Monroe Electronics has taken an active leadership role in industry standard-setting processes related to these systems, as well as new systems that will be deployed in the immediate future, including ATSC 3.0 Advanced Emergency Alerting and the capabilities envisaged by the AWARN Alliance.

II. SUMMARY

Monroe Electronics has been active within the ATSC standards group, and proposed the Advanced Emergency Alert message format that is now part of the ATSC A/331 proposed standard.[2] Monroe is also part of the ATSC Implementation Team, which is charged with developing implementation recommendations for the ATSC 3.0 Advanced Emergency Alerting capability.

Monroe has been an active member in the AWARN Alliance its inception, and the capabilities envisaged by the AWARN Alliance are based on the Advanced Emergency Alerting message specification proposed by Monroe and incorporated in the ATSC 3.0 suite of standards.

In 2016, Monroe introduced the support for ATSC 3.0 Advanced Emergency Alert capabilities, culminating with industry's first over the air ATSC 3.0 transmission with emergency alerting at WRAL-TV in Raleigh, NC.[3]

In GN Docket No. 16-142, the Commission seeks comment on the NOTICE OF PROPOSED RULEMAKING FOR AUTHORIZING THE PERMISSIVE USE OF THE "NEXT GENERATION" TV STANDARD, pertaining to the adoption of Advanced Television Systems Committee (ATSC) 3.0 as the Next Generation TV transmission standard as a new optional standard for television broadcasting. This Next Generation TV standard holds the potential to not only vastly improve the television viewing experience and expand programming opportunities, but would also enhance emergency communications capabilities and create new operational capabilities for broadcast television stations.

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advanced-emergency-alerting-starter-kit-easy-migration-path-next-gen-tv-standard/165129.; also "Now Available: A 'Starter Kit' For ATSC 3.0 Next-Gen Alerting," Radio-Television Business Report, April 24, 2017, http://rbr.com/now-available-a-starter-kit-for-atsc-3-0-next-gen-alerting/.

2 A/331, "Signaling, Delivery, Synchronization, and Error Protection," updated March 22, 2017. This ATSC Proposed Standard specifies the technology and procedures for service signaling and IP-based delivery over broadcast, broadband and hybrid networks.

[3] "WRAL Launches ATSC 3.0 Service," TVNewsCheck, June 29, 2016. http://www.tvnewscheck.com/article/95854/wral-launches-atsc-30-service; also "NAB 2016: Seven Vendors Team Up on ATSC 3.0: Digital Alert Systems, Dolby, GatesAir, Harmonic, LG, Triveni and Zenith," TV Technology, April 17, 2016.

In its NPRM, the Commission seeks comment on specific consumer issues related to the enhanced capabilities that may be available through the use of ATSC 3.0 transmissions. Enhanced emergency information distribution is one key enhanced capabilities and potential benefits of Next Generation TV, and capability that is very much in the public interest. ATSC 3.0 includes an "Advanced Emergency Alerting" capability that will provide next generation emergency information capabilities to the public should the Commission approves its proposed rules.[4]. Monroe Electronics notes that this Advanced Emergency Alerting capability will provide the basis for such initiatives as those promoted by the AWARN Alliance, and already initiated over the air at WRAL-TV under an experimental license.[5]

III. DISCUSSION

The Advanced Emergency Alerting capability in ATSC 3.0 will support a broad range of urgent messages – far beyond the scope and abilities of EAS - for emergency information to the public, as well as restricted messages to closed groups (which could include first responders). The Advanced Emergency Alerting capability native to ATSC 3.0 supports a wide range of multimedia content, including cached or live media, multiple languages, and features useful for app developers on mobile, portable and fixed ATSC 3.0 receivers. This part of the ATSC 3.0 standard is a cornerstone of the technical capabilities advocated by the AWARN Alliance.

An ecosystem has already emerged across industry to bring ATSC 3.0 advanced emergency alerting capabilities to reality. The AWARN Alliance is a voluntary coalition of commercial and public broadcasters, consumer electronics and broadcast technology companies, national trade groups, and service providers who have come together to develop and deploy this ATSC 3.0 based capability. The ATSC Implementation Team provides venue for industry discussions of issues related to implementation of Advanced Emergency Alerting, including operational and technical requirements for the successful inclusion and implementation of emergency alerting as part of the rollout of ATSC 3.0. Key manufacturers, such as Monroe as both a member of the AWARN Alliance and ATSC Implementation Team, have moved forward in implementing and integrating ATSC 3.0 capabilities in their product sets for broadcast television stations.

The Advanced Emergency Alerting message format proposed by Monroe Electronics, and incorporated into the ATSC A/331 Proposed Standard - with additions contributed by several other ATSC members - will provide a revolutionary enhancement to emergency information capabilities over broadcast television. The AEA message format is intended to provide a digital message format

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[4] Authorizing Permissive Use of the "Next Generation" Broadcast Television Standard, Notice of Proposed Rulemaking, GN Docket No. 16-142, FCC 17-13 (Feb. 24, 2017) (NPRM).

[5] "WRAL Launches ATSC 3.0 Service," TVNewsCheck, June 29, 2016. http://www.tvnewscheck.com/article/95854/wral-launches-atsc-30-service; "Q&A: WRAL's Pete Sockett on ATSC 3.0 Broadcasting," TV Technology, July 26, 2016. http://www.tvtechnology.com/atsc3/0031/-qa-wrals-pete-sockett-on-atsc-30-broadcasting/279098; "WRAL Lights Up ATSC 3.0 4K Signal: Launch marks first live ATSC 3.0 simulcast of a commercially licensed television station" TV Technology, June 29, 2016 http://www.tvtechnology.com/atsc3/0031/wral-lights-up-atsc-30-4k-signal/278927.

for ATSC 3.0 related emergency message transmission. It is a specific format for forwarding all-hazard emergency alerts and public warnings and a broad range of other urgent information over an ATSC 3.0 system. This next generation emergency information capability provides the potential for a range of capabilities offered by television broadcasters to fixed, mobile and portable consumer devices that support these features, including:

- Audience targeting, ranging from the general public to non-public restricted messaging to specific groups (such as first responders or other organizations).
- Flexible alert messaging capability, sufficient to handle virtually any form of emergency information, ranging from all hazards public alerting to narrowly targeted urgent messaging for a smaller defined audience, and even to specific messaging for first responder functions
- Location targeting that will allow compatible receivers to monitor alerts that can be addressed to specific geocodes, polygons or circles, essentially meaning that an alert can be targeted as widely as the entire broadcast area, or as narrowly as receivers in a very specific set of coordinates.
- Multimedia capabilities, allowing ATSC 3.0 enabled receivers to receive and display graphics, photos, maps, video, and other assets as part of the emergency information.
- Alert update and cancellation features
- Alert priority settings
- A device "wake-up" parameter, to awaken compatible receivers when in standby or sleep mode.
- Multilingual support, providing the prospect for broadcast viewers to select their language of choice for receiving emergency information.

For the broadcast television community, the Next Generation ATSC 3.0 standard will allow the integration of station-driven emergency information in broad range of services, with the ability to offer the television audience with the potential for individually-tailored alerts and emergency information over a portfolio of products (TV, web, mobile, etc.).

This next generation emergency information capability is a voluntary initiative of broadcasters and equipment manufacturers. ATSC 3.0 Advanced Emergency Alerting and the implementations advocated by the AWARN Alliance are a voluntary initiative that is wholly separate of (although potentially complementary to) the Emergency Alert System (EAS) as specified in the Commission's rules.[6] As complementary functions, we envisage that the EAS will continue to provide its essential functions for national and local public alert and warning, while ATSC 3.0 next generation alerting and capabilities advocated by the AWARN Alliance fulfill a voluntary function by television broadcasters.

Importantly for the broadcast community, the migration to ATSC 3.0 emergency alerting capabilities can leverage many of the assets that over 77% of broadcasters already have in place in

[6] 47 CFR Part 11

their facilities. Because this portion of the television broadcast industry already has certain specific EAS equipment in place that can be upgraded for ATSC 3.0 support, the migration path for these stations may become even easier.[7] Monroe Electronics is working to integrate its EAS equipment into initial ATSC 3.0 environments, providing the stepping-off point to leverage the enhanced public warning capabilities of next-generation digital television.

For the general public, advanced emergency alerting capabilities in ATSC 3.0 mean that emergency information can be presented in a manner that is more targeted, less intrusive, but making more information available. It will support customizable alert preferences, and yield a more useful broadcast alerting experience by making a greater range of information available, while targeting that information relevant to specific areas and even potentially to individual people.

IV. CONCLUSION

Because of the significant public benefit that will be derived from the advanced emergency information capabilities native to ATSC 3.0, and as advocated by the AWARN Alliance, Monroe Electronics suggests that the general public will be well served should the Commission to allow the permissive use of the Next Generation ATSC 3.0 broadcast television transmission standard.

Respectfully submitted,
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[7] "Digital Alert Systems and Triveni Digital Offer ATSC 3.0 Advanced Emergency Alerting Starter Kit for Easy Migration Path to Next-Gen TV Standard" Broadcasting & Cable, April 22, 2017, http://www.broadcastingcable.com/thewire/digital-alert-systems-and-triveni-digital-offer-atsc-30-advanced-emergency-alerting-starter-kit-easy-migration-path-next-gen-tv-standard/165129.